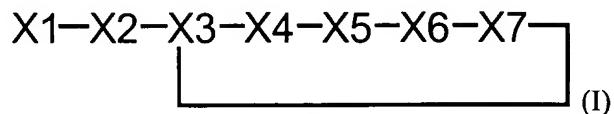


Claims

1. A compound, preferably a C5a receptor antagonist, with the following structure:



, whereby

X1 is a radical having a mass of about 1-300 and whereby X1 is preferably chosen from the group including R5-, R5-CO-, R5-N(R6)-CO-, R5-O-CO-, R5-SO<sub>2</sub>-, R5-N(R6)-SO<sub>2</sub>-, R5-N(R6)-, R5-N(R6)-CS-, R5-N(R6)-C(NH)-, R5-CS-, R5-P(O)OH-, R5-B(OH)-, R5-CH=N-O-CH<sub>2</sub>-CO-, in which R5 and R6 individually and independently are chosen from the group comprising H, F, hydroxy, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, arylalkyl, substituted arylalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl, substituted acyl, alkoxy, alkoxyalkyl, substituted alkoxyalkyl, aryloxyalkyl and substituted aryloxyalkyl,

X2 is a radical that mimics the biologic binding characteristics of a phenylalanine unit,

X3 and X4 individually and independently are a spacer, whereby the spacer is preferably selected from the group comprising amino acids, amino acid analogs and amino acid derivates,

X5 is a radical that mimics the biologic binding characteristics of a cyclohexylalanine or homoleucine unit,

X6 is a radical that mimics the biologic binding characteristics of a tryptophane unit,

X7 is a radical that mimics the biologic binding characteristics of a norleucine or phenylalanine unit,

a chemical bond is formed between X3 and X7, and

the lines – in formula (I) indicate chemical bonds, whereby the chemical bond individually and independently is selected from the group comprising covalent bonds, ionic bonds and coordinative bonds, whereby preferably the bond is a chemical bond and more preferably the chemical bond is a bond selected from the group comprising amide bonds, disulfide bonds, ether bonds, thioether bonds, oxime bonds and aminotriazine bonds.

2. The compound according to claim 1, characterized in that X3 and X7 are individually an amino acid, amino acid analog or amino acid derivative, whereby the chemical bond between X3 and X7 is formed under participation of at least one moiety of X3 and X7, and the moieties for X3 and X7 are individually and independently selected from the group comprising the C terminus, the N terminus and the respective side chain of the amino acid.

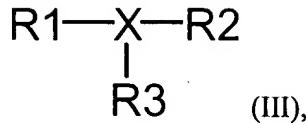
3. The compound according to claim 1 or 2, wherein

X1 is a radical with a mass of about 1-300, whereby the radical is preferably selected from the group comprising R5, R5-CO-, R5-N(R6)-CO-, R5-O-CO-, R5-SO<sub>2</sub>-, R5-N(R6)-C(NH)-, whereby R5 and R6 are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl and substituted aryl;

X2 and X6 are individually and independently an aromatic amino acid, a derivative or an analogon thereof;

X5 and X7 are individually and independently a hydrophobic amino acid, a derivative or an analogon thereof.

4. The compound according to any of claims 1 to 3, whereby X2, X5, X6 and X7 individually and independently have the following structure:



wherein

X is C(R4) or N,

R1 is optionally present and if present then R1 is a radical, that is selected from the group comprising >N-R1B, >C(R1B)(R1D) and >O, whereby R1B and R1D are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl;

R2 is optionally present and if R2 is present then R2 is a radical that is selected from the group comprising >C=O, >C=S, >SO<sub>2</sub>, >S=O, >C=NH, >C=N-CN, >PO(OH), >B(OH), >CH<sub>2</sub>, >CH<sub>2</sub>CO, >CHF and >CF<sub>2</sub>;

R4 is a radical, whereby the radical is selected from the group comprising H, F, CH<sub>3</sub>, CF<sub>3</sub>, alkyl and substituted alkyl;

the binding of structure (III) to the moieties X1 and X3, X4 and X6, X5 and X7, and X6 and X3 is preferably carried out via R1 and R2;

for X2 and for X6 individually and independently R3 is a radical, in which the radical comprises an aromatic group and is selected from the group comprising aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl, substituted heteroarylalkyl, alkyloxy-alkyl, substituted alkyloxy-alkyl, alkyloxy-cycloalkyl, substituted alkyloxy-cycloalkyl, alkyloxy-heterocyclyl, substituted alkyloxy-heterocyclyl, alkyloxy-aryl, substituted alkyloxy-aryl, alkyloxy-heteroaryl, substituted alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl; and

for X5 and for X7 individually and independently R3 is a radical, whereby the radical comprises an aliphatic or aromatic group and preferably is selected from the group comprising alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl, substituted heteroarylalkyl, cycloalkylalkyl, substituted cycloalkylalkyl, heterocyclylalkyl, substituted heterocyclylalkyl, alkyloxy-alkyl, substituted alkyloxy-alkyl, alkyloxy-cycloalkyl, substituted alkyloxy-cycloalkyl, alkyloxy-heterocyclyl, substituted alkyloxy-heterocyclyl, alkyloxy-aryl, substituted alkyloxy-aryl, alkyloxy-heteroaryl, substituted alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl.

5. The compound according to claim 4, characterized in that a ring is formed under participation of R3 and R4.

6. The compound according to claim 4 or 5, characterized in that for X2 and for X6 individually and independently R3 is selected from the group comprising phenyl, substituted phenyl, benzyl, substituted benzyl, 1,1-diphenylmethyl, substituted 1,1-diphenylmethyl, naphthylmethyl, substituted naphthylmethyl, thienylmethyl, substituted thienylmethyl, benzothienylmethyl, substituted benzothienylmethyl, imidazolylmethyl, substituted imidazolylmethyl, indolylmethyl and substituted indolylmethyl.

7. The compound according to any of claims 4 to 6 characterized in that for X5 and for X7 individually and independently R3 is selected from the group comprising C3-C5-alkyl, substituted C3-C5-alkyl, C5-C7-cycloalkyl, substituted C5-C7-cycloalkyl, C5-C7-cycloalkylmethyl, substituted C5-C7-cycloalkylmethyl, cycloalkylethyl, substituted cycloalkylethyl, benzyl, substituted benzyl, phenylethyl, naphthylmethyl, thienylmethyl, propenyl, propinyl, methylthioethyl, imidazolylmethyl, substituted imidazolylmethyl, indolylmethyl and substituted indolylmethyl.

8. The compound according to any of claims 1 to 8, characterized in that X1 is selected from the group comprising H, acetyl, propanoyl, butanoyl, benzoyl, fluoromethylcarbonyl, difluoromethylcarbonyl, phenyl, oxycarbonyl, methyl-oxycarbonyl, phenyl-aminocarbonyl, methyl-aminocarbonyl, phenyl-sulfonyl, 2,6-dioxo-hexahydro-pyrimidine-4-carbonyl and methyl-sulfonyl.

9. The compound according to any of claims 1 to 8, wherein

X2 is a derivative of an amino acid that is selected from the group comprising phenylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine, 3,3-diphenylalanine, tyrosine, tryptophane, histidine and each respective derivatives thereof;

or X2 and X1 taken together are PhCH<sub>2</sub>CH<sub>2</sub>CO- or PhCH<sub>2</sub>-;

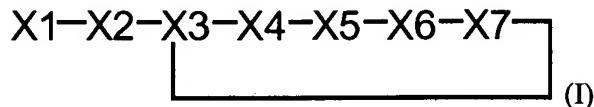
X6 is a derivative of an amino acid, that is selected from the group comprising tryptophane, phenylalanine, tyrosine, histidine, 1-naphtylalanine, benzothienylalanine, 2-aminoindan-2-carboxylic acid, 2-thienylalanine, 3-thienylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine and respective derivatives thereof;

X5 is a derivative of an amino acid that is selected from the group comprising D-cyclohexylalanine, D-cyclohexylglycine, D-homo-cyclohexylalanine, D-homoleucine, D-cysteine(tBu), D-cysteine(iPr), octahydroindol-2-carboxylic acid, 2-methyl-D-phenylalanine and respective derivatives thereof; and

X7 is a derivative of an amino acid that is selected from the group comprising norvaline, norleucine, homo-leucine, leucine, isoleucine, Valine, cysteine, cysteine(Me), cysteine(Et), cysteine(Pr), methionine, allylglycine, propargylglycine, cyclohexylglycine, cyclohexylalanine, phenylalanine, tyrosine, tryptophane, histidine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine and respective derivatives thereof.

10. The compound according to any of claims 1 to 9, wherein X1 and/or X4 comprise one or more groups that improve water solubility, whereby the water solubility improving group is selected from the group comprising hydroxy, keto, carboxamido, ether, urea, carbamate, amino, substituted amino, Guanidino, pyridyl and carboxyl.

11. The compound, preferably a C5a receptor antagonist, having the following structure:



, whereby X1-X3 and X5-X7 are defined as in one of claims 1 to 10 and whereby

X4 is a cyclic or a non-cyclic amino acid, whereby the cyclic amino acid is selected from the group comprising proline, pipecolinic acid, azetidine-2-carboxylic acid, tetrahydroisoquinoline-3-carboxylic acid, tetrahydroisoquinoline-1-carboxylic acid, octahydroindole-2-carboxylic acid, 1-aza-bicyclo-[3.3.0]-octane-2-carboxylic acid, 4-phenyl-pyrrolidine-2-carboxylic acid, cis-Hyp and trans-Hyp, and whereby the non-cyclic amino acid is selected from the group comprising Ser, Gln, Asn, Cys(O<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CONH<sub>2</sub>), Arg, Hyp(COCH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>), Hyp(CONH-CH<sub>2</sub>CH(OH)-CH<sub>2</sub>OH) and respective derivatives thereof and respective analogs thereof; and

the lines – in formula (I) indicate chemical bonds, whereby the chemical bond is individually and independently selected from the group comprising covalent bonds, ionic bonds and coordinative bonds, whereby preferably the bond is a chemical bond and more preferably the chemical bond is a bond selected from the group comprising amide bonds, disulfide bonds, ether bonds, thioether bonds, oxime bonds and aminotriazine bonds.

12. The compound according to claim 11, characterized in that the amino acid represented by X4 is preferably selected from the group comprising proline, pipecolinic acid, azetidine-2-carboxylic acid, tetrahydroisoquinoline-3-carboxylic acid, tetrahydroisoquinoline-1-carboxylic acid, octahydroindole-2-carboxylic acid, 1-aza-bicyclo-[3.3.0]-octane-2-carboxylic acid, 4-phenyl-pyrrolidine-2-carboxylic acid, Hyp, Ser, Gln, Asn, Cys(O<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CONH<sub>2</sub>) and Arg.

13. The compound according to any of claims 11 to 12, whereby

X2 is a derivative of an amino acid that is selected from the group comprising phenylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine, 3,3-diphenylalanine, tyrosine, tryptophane, histidine and respective derivatives thereof;

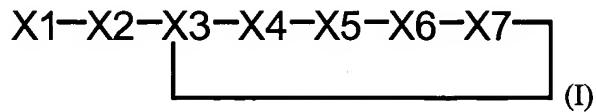
or X2 and X1 taken together are PhCH<sub>2</sub>CH<sub>2</sub>CO- or PhCH<sub>2</sub>-;

X6 is a derivative of an amino acid that is selected from the group comprising tryptophane, phenylalanine, tyrosine, histidine, 1-naphtylalanine, benzothienylalanine, 2-aminoindane-2-carboxylic acid, 2-thienylalanine, 3-thienylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine and respective derivatives thereof;

X5 is a derivative of an amino acid that is selected from the group comprising D-cyclohexylalanine, D-cyclohexylglycine, D-homo-cyclohexylalanine, D-homoleucine, D-cysteine(tBu), D-cysteine(iPr), octahydroindole-2-carboxylic acid, 2-methyl-D-phenylalanine and respective derivatives thereof; and

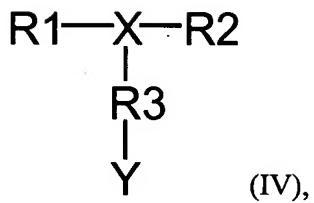
X7 is a derivative of an amino acid that is selected from the group comprising norvaline, norleucine, homo-leucine, leucine, isoleucine, Valine, cysteine, cysteine(Me), cysteine(Et), cysteine(Pr), methionine, allylglycine, propargylglycine, cyclohexylglycine, cyclohexylalanine, phenylalanine, tyrosine, tryptophane, histidine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine and respective derivatives thereof.

14. A compound, preferably a C5a receptor antagonist, having the following structure:



, whereby X1-X2 and X4-X7 are defined as in any of claims 1 to 13 and whereby

X3 has the following structure



wherein

X is C(R4) or N,

R1 is optionally present and if R1 is present then R1 is a radical which is selected from the group comprising >N-R1B, >C(R1B)(R1D) and >O, whereby R1B and R1D are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl;

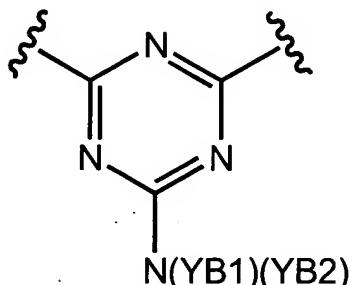
R2 is optionally present and if R2 is present then R2 is a radical that is selected from the group comprising >C=O, >C=S, >SO<sub>2</sub>, >PO(OH), >B(OH), >CH<sub>2</sub>, >CH<sub>2</sub>CO, >CHF and >CF<sub>2</sub>;

R4 is a radical, whereby the radical is selected from the group comprising H, F, CF<sub>3</sub>, alkyl and substituted alkyl;

the binding of structure (IV) to the moieties X2 and X4 preferably takes place via R1 and R2;

R3 is a radical, whereby the radical is selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, cycloalkylalkyl, substituted cycloalkylalkyl, heterocyclylalkyl, substituted heterocyclylalkyl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl.

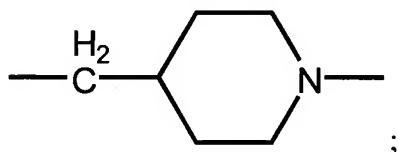
Y is optionally present and if Y is present then Y is a radical that is selected from the group comprising -N(YB)-, -O-, -S-, -S-S-, -CO-, -C=N-O-, -CO-N(YB)- and



, whereby YB, YB1 and YB2 are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylakyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl.

15. The compound according to claim 14, characterized in that

R3 is a radical selected from the group comprising methyl, ethyl, propyl, butyl, benzyl and



Y is optionally present and if Y is present then Y is a radical selected from the group comprising -N(YB)-, -O-, -S- and -S-S-, and YB is preferably defined as in claim 14.

16. The compound according to any of claims 14 to 15, whereby

X2 is a derivative of an amino acid selected from the group comprising phenylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine, 3,3-diphenylalanine, tyrosine, tryptophane, histidine and respective derivatives thereof;

or X2 and X1 taken together are PhCH<sub>2</sub>CH<sub>2</sub>CO- or PhCH<sub>2</sub>-;

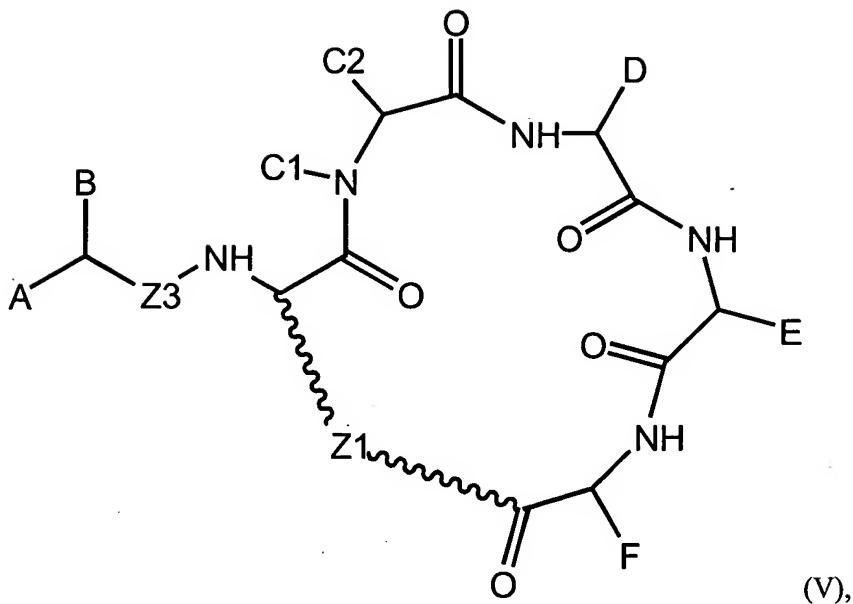
X6 is a derivative of an amino acid selected from the group comprising tryptophane, phenylalanine, tyrosine, histidine, 1-naphtylalanine, benzothienylalanine, 2-aminoindane-2-carboxylic acid, 2-thienylalanine, 3-thienylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chlorophenylalanine, 3-chlorophenylalanine, 4-chlorophenylalanine and respective derivatives thereof;

X5 is a derivative of an amino acid selected from the group comprising D-cyclohexylalanine, D-cyclohexylglycine, D-homo-cyclohexylalanine, D-homoleucine, D-cysteine(tBu), D-cysteine(iPr), octahydroindole-2-carboxylic acid, 2-methyl-D-phenylalanine and respective derivatives thereof; and

X7 is a derivative of an amino acid selected from the group comprising norvaline, norleucine, homo-leucine, leucine, isoleucine, valine, cysteine, cysteine(Me), cysteine(Et), cysteine(Pr), methionine, allylglycine, propargylglycine, cyclohexylglycine, cyclohexylalanine, phenylalanine, tyrosine, tryptophane, histidine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine and respective derivatives thereof.

17. The compound according to any of the preceding claims, characterized in that X3 is a derivative of an amino acid selected from the group comprising alpha-amino-glycine, alpha-beta-diaminopropionic acid (Dap), alpha-gamma-diaminobutyric acid (Dab), ornithine, lysine, homolysine, Phe(4-NH<sub>2</sub>), 2-amino-3-(4-piperidinyl)propionic acid and 2-amino-3-(3-piperidinyl)propionic acid, and the amino acid is derivatized at the side chain.

18. A compound, preferably a C5a receptor antagonist, preferably according to any of the preceding claims, having the following structure:



, whereby

A is selected from the group comprising H, NH<sub>2</sub>, NHalkyl, Nalkyl<sub>2</sub>, NHacyl and OH,

B is selected from the group comprising CH<sub>2</sub>(aryl), CH(aryl)<sub>2</sub>, CH<sub>2</sub>(heteroaryl), substituted CH<sub>2</sub>(aryl), aryl, substituted aryl and heteroaryl,

C1 and C2 are individually and independently selected from the group comprising alkyl and substituted alkyl, whereby between C1 and C2 optionally a bond can be formed,

D is selected from the group comprising alkyl, cycloalkyl, CH<sub>2</sub>(cycloalkyl), CH<sub>2</sub>CH<sub>2</sub>(cycloalkyl), CH<sub>2</sub>Ph(2-Me) and CH<sub>2</sub>-S-alkyl,

E is selected from the group comprising CH<sub>2</sub>(aryl), substituted CH<sub>2</sub>(aryl) and CH<sub>2</sub>(heteroaryl),

F is selected from the group comprising alkyl, CH<sub>2</sub>-S-alkyl, CH<sub>2</sub>CH<sub>2</sub>-S-Me, CH<sub>2</sub>CH=CH<sub>2</sub>, CH-CCH, cyclohexyl, CH<sub>2</sub>cyclohexyl, CH<sub>2</sub>Ph, CH<sub>2</sub>naphthyl, CH<sub>2</sub>thienyl,

Z1 is selected from the group comprising  $(CH_2)_nNH$  with  $n = 1, 2, 3, 4$ ,  $(CH_2)3O$ ,  $(CH_2)2O$ ,  $(CH_2)4$ ,  $(CH_2)3$ ,  $CH_2Ph(4-NH)$  and  $CH_2(4\text{-piperidinyl})$ , and

Z3 is optionally present and if Z3 is present then it is selected from the group comprising CO and CH2.

19. The compound according to claim 18, characterized in, that

A is selected from the group comprising H, NH<sub>2</sub>, NHEt, NHAc, OH,

B is selected from the group comprising  $CH_2Ph$ ,  $CH_2Ph(4-F)$ ,  $CH(Ph)2$ ,  $CH_2\text{thienyl}$ ,  $CH_2\text{naphthyl}$ , phenyl,  $Ph(4-F)$  and thieryl,

C1 is selected from the group comprising H and methyl, C2 is selected from the group comprising methyl and  $CH_2OH$ , or if C1 and C2 are connected by a bond, the resulting structure is selected from the group comprising  $-(CH_2)2-$ ,  $-(CH_2)3-$ ,  $-(CH_2)4-$  and  $-CH_2CH(OH)CH_2-$ .

D is selected from the group comprising  $CH_2CH_2iPr$ ,  $CH_2iPr$ , cyclohexyl,  $CH_2\text{cyclohexyl}$ ,  $CH_2CH_2\text{cyclohexyl}$ ,  $CH_2Ph(2-Me)$ ,  $CH_2-S-tBu$  and  $CH_2-S-iPr$ ,

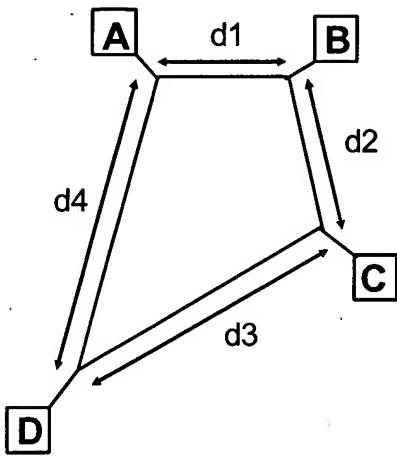
E is selected from the group comprising  $CH_2Ph$ ,  $CH_2Ph(2-Cl)$ ,  $CH_2Ph(3-Cl)$ ,  $CH_2Ph(4-Cl)$ ,  $CH_2Ph(2-F)$ ,  $CH_2Ph(3-F)$ ,  $CH_2Ph(4-F)$ ,  $CH_2\text{indolyl}$ ,  $CH_2\text{thienyl}$ ,  $CH_2\text{benzothienyl}$  and  $CH_2\text{naphthyl}$ ,

F is selected from the group comprising  $(CH_2)3CH_3$ ,  $(CH_2)2CH_3$ ,  $(CH_2)2-iPr$ ,  $CH_2-iPr$ ,  $iPr$ ,  $CH_2-S-Et$ ,  $CH_2CH_2-S-Me$ ,  $CH_2CH=CH_2$ ,  $CH_2-CCH$  and cyclohexyl,

Z1 is selected from the group comprising  $(CH_2)_nNH$  with  $n=1, 2, 3, 4$ ,  $(CH_2)3O$ ,  $CH_2Ph(4-NH)$  and  $CH_2(4\text{-piperidinyl})$ , and

Z3 is optionally present, and if Z3 is present, then it is selected from the group comprising CO and CH2.

20. A compound, preferably a C5a receptor antagonist, whereby the compound has the following structure:



whereby d1, d2, d3 and d4 represent the distances of A, B, C and D in at least one energetically accessible conformer of the compound and have the following values:

$$d1 = 5.1 \pm 1.0 \text{ \AA}$$

$$d2 = 11.5 \pm 1.0 \text{ \AA}$$

$$d3 = 10.0 \pm 1.5 \text{ \AA}$$

$$d4 = 6.9 \pm 1.5 \text{ \AA}$$

A and C are individually and independently a hydrophobic radical, whereby the hydrophobic radical is selected from the group comprising alkyl, cycloalkyl, heterocyclyl, aryl and heteroaryl;

B and D are individually and independently an aromatic or a heteroaromatic radical, whereby preferably the aromatic radical is aryl, and preferably the heteroaromatic radical is heteroaryl.

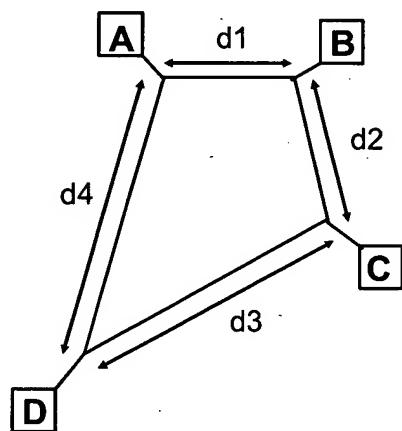
21. The compound according to claim 20, whereby A and C are individually and independently selected from the group comprising C3-C6-alkyl, C5-C7-cycloalkyl,

methylthioethyl, methylthio-tert-butyl, indolyl, phenyl, naphthyl, thienyl, propenyl, propinyl, hydroxyphenyl, indolyl and imidazolyl;

B is selected from the group comprising phenyl, substituted phenyl, naphthyl, thienyl, benzothienyl, hydroxyphenyl, indolyl, and imidazolyl; and

D is selected from the group comprising phenyl, naphthyl, thienyl, thiazolyl, furanyl, hydroxyphenyl, indolyl and imidazolyl.

22. A compound, preferably a C5a receptor antagonist, having the following structure:



, whereby

A, B, C and D represent the C-alpha atoms in amino acids, amino acid analogs or amino acid derivatives,

d1, d2, d3 and d4 represent the distances of A, B, C and D in at least one energetically accessible conformer of the compound and have the following values:

$$d1 = 3,9 \pm 0,5 \text{ \AA}$$

$$d2 = 3,9 \pm 0,5 \text{ \AA}$$

$$d3 = 9,0 \pm 1,5 \text{ \AA}$$

$$d4 = 9,0 \pm 1,5 \text{ \AA};$$

whereby the amino acids whose alpha-atoms are represented by A and C, individually and independently have a hydrophobic amino acid side chain that comprises an alkyl-, cycloalkyl, cycloalkylalkyl, heterocyclyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or methylthio-tert-butyl group,

whereby the amino acids whose alpha-atoms are represented by B and D, individually and independently have an aromatic or heteroaromatic amino acid side chain that comprises an aryl, arylalkyl, heteroaryl or heteroarylalkyl group.

23. The compound according to claim 22,

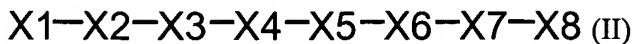
whereby the amino acid whose alpha-atom is represented by A, is selected from the group comprising C3-C6-alkyl, methylthioethyl, propenyl, propinyl, R5, methyl-R5 and ethyl-R5, whereby R5 is a radical that is selected from the group comprising C5-C7-cycloalkyl, phenyl, substituted phenyl, hydroxyphenyl, indolyl, imidazolyl, naphtyl and thienyl;

whereby the amino acid whose alpha-atom is represented by B, is selected from the group comprising R5, methyl-R5 and ethyl-R5, whereby R5 is a radical that is selected from the group comprising phenyl, substituted phenyl, naphtyl, thienyl, benzothienyl, hydroxyphenyl, indolyl and imidazolyl;

whereby the amino acid whose alpha-atom is represented by C, is selected from the group comprising C3-C6-alkyl, R5, methyl-R5 and ethyl-R5, whereby R5 is a radical that is selected from the group comprising C5-C7-cycloalkyl, phenyl, 1-methyl-phenyl, 2-methyl-phenyl, 3-methyl-phenyl and S-tBu; and

whereby the amino acid whose alpha-atom is represented by D, is selected from the group comprising R5, methyl-R5 and ethyl-R5, whereby R5 is a radical, that is selected from the group comprising phenyl, naphthyl, thienyl, thiazolyl, furanyl, hydroxyphenyl, indolyl and imidazolyl.

24. A compound, preferably a C5a receptor antagonist, having the following structure:



, whereby

X1 is a radical having a mass of about 1-300 and whereby X1 is preferably selected from the group comprising R5-, R5-CO-, R5-N(R6)-CO-, R5-O-CO-, R5-SO<sub>2</sub>-, R5-N(R6)-SO<sub>2</sub>-, R5-N(R6)-, R5-N(R6)-CS-, R5-N(R6)-C(NH)-, R5-CS-, R5-P(O)OH-, R5-B(OH)-, R5-CH=N-O-CH<sub>2</sub>-CO-, whereby R5 and R6 are individually and independently selected from the group comprising H, F, hydroxy, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, arylalkyl, substituted arylalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl, substituted acyl, alkoxy, alkoxyalkyl, substituted alkoxyalkyl, aryloxyalkyl and substituted aryloxyalkyl,

X2 is a radical that mimics the biological binding characteristics of a phenylalanine unit,

X3 and X4 are individually and independently a spacer, whereby the spacer is preferably selected from the group comprising amino acids, amino acid analogs and amino acid derivates,

X5 is a radical that mimics the biological binding characteristics of a cyclohexylalanine or homoleucine unit,

X6 is a radical that mimics the biological binding characteristics of a tryptophane unit,

X7 is a radical that mimics the biological binding characteristics of a norleucine or phenylalanine unit,

X8 is a radical, whereby the radical is optionally present in structure II, and if it is present, it is selected from the group comprising H, NH<sub>2</sub>, OH, NH-OH, NH-Oalkyl, amino, substituted amino, alkoxy, substituted alkoxy, hydrazino, substituted hydrazino, amioooxy, substituted amioooxy, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl,

heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, aryl, substituted aryl, amino acid, amino acid derivative and amino acid analogon;

the connecting lines – in formula (II) represent chemical bonds, whereby the chemical bond is individually and independently selected from the group comprising covalent bonds, ionic bonds and coordinative bonds, whereby preferably the bond is a chemical bond and more preferably the chemical bond is a bond selected from the group comprising amide bonds, disulfide bonds, ether bonds, thioether bonds, oxime bonds and aminotriazine bonds.

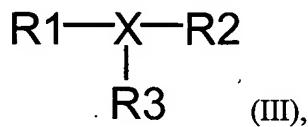
25. The compound according to claim 24, whereby

X1 is a radical having a mass of about 1-300, whereby the radical is preferably selected from the group comprising R5, R5-CO-, R5-N(R6)-CO-, R5-O-CO-, R5-SO<sub>2</sub>-, R5-N(R6)-C(NH)-, whereby preferably R5 and R6 are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl and substituted aryl;

X2 and X6 are individually and independently an aromatic amino acid, a derivative or an analogon thereof,

X5 and X7 are individually and independently a hydrophobic amino acid, a derivative or an analogon thereof.

26. The compound according to any of claims 24 to 25, whereby X2, X5, X6 and X7 have individually and independently the following structure:



whereby

X is C(R4) or N,

R1 is optionally present and if R1 is present, it is a radical that is selected from the group comprising >N-R1B, >C(R1B)(R1D) and >O, whereby R1B and R1D are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl;

R2 is optionally present and if R2 is present, it is a radical selected from the group comprising >C=O, >C=S, >SO<sub>2</sub>, >S=O, >C=NH, >C=N-CN, >PO(OH), >B(OH), >CH<sub>2</sub>, >CH<sub>2</sub>CO, >CHF and >CF<sub>2</sub>;

R4 is a radical, whereby the radical is selected from the group comprising H, F, CH<sub>3</sub>, CF<sub>3</sub>, alkyl and substituted alkyl;

and the binding of structure (III) to the moieties X1 and X3, X4 and X6, X5 and X7, and X6 and X8 preferably takes place via R1 and R2;

for X2 and for X6 individually and independently R3 is a radical, whereby the radical comprises an aromatic group and is selected from the group comprising aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl, substituted heteroarylalkyl, alkyloxy-alkyl, substituted alkyloxy-alkyl, alkyloxy-cycloalkyl, substituted alkyloxy-cycloalkyl, alkyloxy-heterocyclyl, substituted alkyloxy-heterocyclyl, alkyloxy-aryl, substituted alkyloxy-aryl, alkyloxy-heteroaryl, substituted alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl; and

for X5 and for X7 individually and independently R3 is a radical, whereby the radical comprises an aliphatic or aromatic group and preferably is selected from the group comprising alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl, substituted heteroarylalkyl, cycloalkylalkyl, substituted cycloalkylalkyl, heterocyclylalkyl, substituted heterocyclylalkyl, alkyloxy-alkyl, substituted alkyloxy-alkyl, alkyloxy-cycloalkyl, substituted alkyloxy-cycloalkyl, alkyloxy-heterocyclyl, substituted alkyloxy-heterocyclyl, alkyloxy-aryl, substituted alkyloxy-aryl, alkyloxy-heteroaryl, substituted alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl;

alkyloxy-heteroaryl, alkylthio-alkyl, substituted alkylthio-alkyl, alkylthio-cycloalkyl and substituted alkylthio-cycloalkyl.

27. The compound according to claim 26, characterized in that a ring is formed using R3 and R4.

28. The compound according to claim 26 or 27, characterized in that for X2 and for X6 individually and independently R3 is selected from the group comprising phenyl, substituted phenyl, benzyl, substituted benzyl, 1,1-diphenylmethyl, substituted 1,1-diphenylmethyl, naphthylmethyl, substituted naphthylmethyl, thienylmethyl, substituted thienylmethyl, benzothienylmethyl, substituted benzothienylmethyl, imidazolylmethyl, substituted imidazolylmethyl, indolylmethyl and substituted indolylmethyl.

29. The compound according to any of claims 24 to 28, in particular according to any of claims 26 to 28, characterized in that for X5 and for X7 individually and independently R3 is selected from the group comprising C3-C5-alkyl, substituted C3-C5-alkyl, C5-C7-cycloalkyl, substituted C5-C7-cycloalkyl, C5-C7-cycloalkylmethyl, substituted C5-C7-cycloalkylmethyl, cycloalkylethyl, substituted cycloalkylethyl, benzyl, substituted benzyl, phenylethyl, naphthylmethyl, thienylmethyl, propenyl, propinyl, methylthioethyl, imidazolylmethyl, substituted imidazolylmethyl, indolylmethyl and substituted indolylmethyl.

30. The compound according to any of the preceding claims, in particular according to any of claims 24 to 29, characterized in that X8 is selected from the group comprising H, OR1 and NR1R2, whereby R1 and R2 are individually and independently selected from the group comprising H, alkyl, aryl, cycloalkyl and arylalkyl.

31. The compound according to any of claims 24 to 30, characterized in that X1 is selected from the group comprising H, acetyl, propanoyl, butanoyl, benzoyl, fluoromethylcarbonyl, difluoromethylcarbonyl, phenyl, oxycarbonyl, methyl-oxycarbonyl, phenyl-aminocarbonyl, methyl-aminocarbonyl, phenyl-sulfonyl, 2,6-dioxo-hexahydro-pyrimidine-4-carbonyl and methyl-sulfonyl.

32. The compound according to any of claims 24 to 31, whereby X1 and/or X4 comprise one or more groups that improve water solubility, whereby the water solubility improving group is selected from the group comprising hydroxy, keto, carboxamido, ether, urea, carbamate, amino, substituted amino, guanidino, pyridyl and carboxyl.

33. A compound, preferably a C5a receptor antagonist, having the following structure:



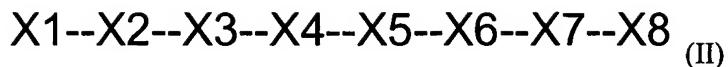
, whereby X1-X3 and X5-X8 are defined as in any of claims 24 to 32 and whereby

X4 is a cyclic or a non-cyclic amino acid, whereby the cyclic amino acid is selected from the group comprising proline, pipecolic acid, azetidine-2-carboxylic acid, tetrahydroisoquinoline-3-carboxylic acid, tetrahydroisoquinoline-1-carboxylic acid, octahydroindole-2-carboxylic acid, 1-aza-bicyclo-[3.3.0]-octane-2-carboxylic acid, 4-phenyl-pyrrolidine-2-carboxylic acid, cis-Hyp and trans-Hyp, and the non-cyclic amino acid is selected from the group comprising Ser, Gln, Asn, Cys(O<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CONH<sub>2</sub>), Arg, Hyp(COCH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>), Hyp(CONH-CH<sub>2</sub>CH(OH)-CH<sub>2</sub>OH) and respective derivatives thereof and respective analogs thereof; and

the connecting lines – in formula (I) represent chemical bonds, whereby preferably the chemical bond is individually and independently selected from the group comprising covalent bonds, ionic bonds and coordinative bonds, whereby preferably the bond is a chemical bond and more preferably the chemical bond is a bond selected from the group comprising amide bonds, disulfide bonds, ether bonds, thioether bonds, oxime bonds and aminotriazine bonds.

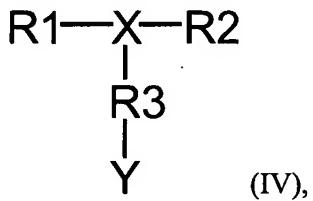
34. The compound according to claim 33, characterized in that the amino acid represented by X4 preferably is chosen from the group comprising proline, Pipecolic acid, azetidine-2-carboxylic acid, tetrahydroisoquinoline-3-carboxylic acid, tetrahydroisoquinoline-1-carboxylic acid, octahydroindole-2-carboxylic acid, 1-aza-bicyclo-[3.3.0]-octane-2-carboxylic acid, 4-phenyl-pyrrolidine-2-carboxylic acid, Hyp, Ser, Gln, Asn, Cys(O<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CONH<sub>2</sub>) and Arg.

35. A compound, preferably a C5a receptor antagonist, having the following structure:



, whereby X1-X2 and X4-X8 are defined as in any of claims 24 to 34 and whereby

X3 has the following structure:



whereby

X is C(R4) or N,

R1 is optionally present and if R1 is present it is a radical selected from the group comprising >N-R1B, >C(R1B)(R1D) and >O, whereby R1B and R1D are individually and independently selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocyclyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl;

R2 is optionally present and if R2 is present it is a radical selected from the group comprising >C=O, >C=S, >SO<sub>2</sub>, >PO(OH), >B(OH), >CH<sub>2</sub>, >CH<sub>2</sub>CO, >CHF and >CF<sub>2</sub>;

R4 is a radical, whereby the radical is selected from the group comprising H, F, CF<sub>3</sub>, alkyl and substituted alkyl;

the binding of structure (IV) to the moieties X2 and X4 preferably takes place via R1 and R2;

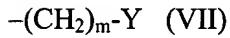
R3 is a radical selected from the group comprising H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, cycloalkylalkyl, substituted cycloalkylalkyl, heterocyclyl, substituted heterocyclyl, heterocyclylalkyl, substituted heterocyclylalkyl, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heteroaryl, substituted heteroaryl, heteroarylalkyl, substituted heteroarylalkyl, acyl, substituted acyl, alkoxyalkyl, substituted alkoxyalkyl, aryloxyalkyl,

substituted aryloxyalkyl, sulfhydrylalkyl, substituted sulfhydrylalkyl, hydroxyalkyl, substituted hydroxyalkyl, carboxyalkyl, substituted carboxyalkyl, carboxamidoalkyl, substituted carboxamidoalkyl, carboxyhydrazinoalkyl, ureidoalkyl aminoalkyl, substituted aminoalkyl, guanidinoalkyl and substituted guanidinoalkyl;

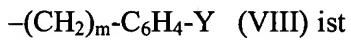
Y is optionally present and if present is a radical that is selected from the group comprising H, -N(YB1)-CO-YB2, -N(YB1)-CO-N(YB2)(YB3), -N(YB1)-C(N-YB2)-N(YB3)(YB4), -N(YB1)(YB2), -N(YB1)-SO<sub>2</sub>-YB2, O-YB1, S-YB1, -CO-YB1, -CO-N(YB1)(YB2) and -C=N-O-YB1, whereby YB1, YB2, YB3 and YB4 are individually and independently selected from the group comprising H, CN, NO<sub>2</sub>, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocycl, substituted heterocycl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylakyl, substituted arylalkyl, cycloalkylalkyl and substituted cycloalkylalkyl.

36. The compound according to claim 35, characterized in that

R3 is a radical having the structure



or



, whereby

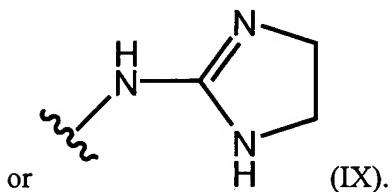
m is 1, 2, 3 or 4;

Y is N(R3b)(R3c) or -N(YB1)-C(N-YB2)-N(YB3)(YB4), whereby R3b, R3c, YB1, YB2, YB3 and YB4 are individually and independently selected from the group comprising H, CN and alkyl.

37. The compound according to claim 35 or 36, characterized in that a ring is formed between two moieties of the compound, whereby the moieties of the compound are individually and independently selected from the group comprising YB1, YB2, YB3 and YB4.

38. The compound according to claim 37, characterized in that the ring is formed using YB2 and YB3.

39. The compound according to any of claims 35 to 38, characterized in that Y is -NH<sub>2</sub>



40. The compound according to any of claims 24 to 39, whereby

X2 is a derivative of an amino acid selected from the group comprising phenylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chloro-phenylalanine, 3-chloro-phenylalanine, 4-chloro-phenylalanine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine, 3,3-diphenylalanine, tyrosine, tryptophane, histidine and respective derivatives thereof;

or X2 and X1 together are PhCH<sub>2</sub>CH<sub>2</sub>CO- or PhCH<sub>2</sub>-;

X6 is a derivative of an amino acid selected from the group comprising tryptophane, phenylalanine, tyrosine, histidine, 1-naphtylalanine, benzothienylalanine, 2-aminoindane-2-carboxylic acid, 2-thienylalanine, 3-thienylalanine, 2-fluoro-phenylalanine, 3-fluoro-phenylalanine, 4-fluoro-phenylalanine, 2-chloro-phenylalanine, 3-chloro-phenylalanine, 4-chloro-phenylalanine and respective derivatives thereof;

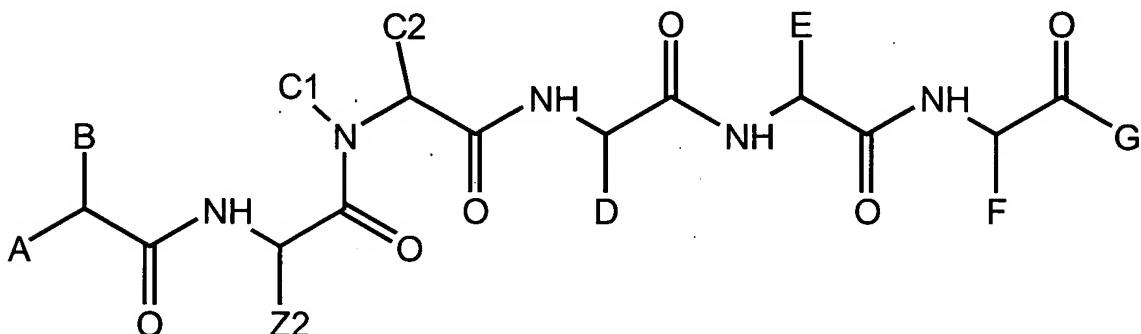
X5 is a derivative of an amino acid selected from the group comprising D-cyclohexylalanine, D-cyclohexylglycine, D-homo-cyclohexylalanine, D-homoleucine, D-cysteine(tBu), D-cysteine(iPr), octahydroindole-2-carboxylic acid, 2-methyl-D-phenylalanine and respective derivatives thereof; and

X7 is a derivative of an amino acid selected from the group comprising norvaline, norleucine, homo-leucine, leucine, isoleucine, valine, cysteine, cysteine(Me), cysteine(Et), cysteine(Pr),

methionine, allylglycine, propargylglycine, cyclohexylglycine, cyclohexylalanine, phenylalanine, tyrosine, tryptophane, histidine, 1-naphtylalanine, 2-thienylalanine, 3-thienylalanine and respective derivatives thereof.

41. The compound according to any of the preceding claims, characterized in that X3 is an amino acid derivative of an amino acid, whereby the amino acid is selected from the group comprising alpha-amino-glycine, alpha-beta-diaminopropionic acid (Dap), alpha-gamma-diaminobutanoic acid (Dab), ornithine, lysine, homolysine, Phe(4-NH<sub>2</sub>), 2-amino-3-(4-piperidinyl)propionic acid and 2-amino-3-(3-piperidinyl)propionic acid, and the amino acid is derivatized at the side chain.

42. A compound, preferably a C5a receptor antagonist, preferably according to any of the preceding claims, having the following structure:



(VI),

, whereby

A is selected from the group comprising H, NH<sub>2</sub>, NHalkyl, Nalkyl<sub>2</sub>, NHacyl, substituted NHacyl and OH,

B is selected from the group comprising CH<sub>2</sub>(aryl), CH(aryl)<sub>2</sub>, CH<sub>2</sub>(heteroaryl) and substituted CH<sub>2</sub>(aryl),

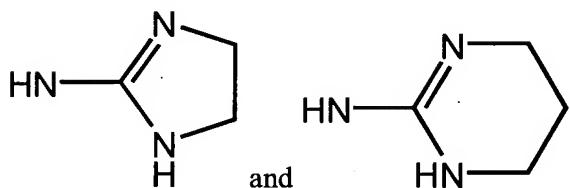
C1 and C2 are individually and independently selected from the group comprising alkyl and substituted alkyl, whereby optionally a bond can be formed between C1 and C2,

D is selected from the group comprising alkyl, cycloalkyl, CH<sub>2</sub>(cycloalkyl), CH<sub>2</sub>CH<sub>2</sub>(cycloalkyl), CH<sub>2</sub>Ph(2-Me) and CH<sub>2</sub>-S-alkyl,

E is selected from the group comprising CH<sub>2</sub>(aryl), substituted CH<sub>2</sub>(aryl) and CH<sub>2</sub>(heteroaryl),

F is selected from the group comprising alkyl, CH<sub>2</sub>-S-alkyl, CH<sub>2</sub>CH<sub>2</sub>-S-Me, CH<sub>2</sub>CH=CH<sub>2</sub>, CH-CCH, cyclohexyl, CH<sub>2</sub>cyclohexyl, CH<sub>2</sub>Ph, CH<sub>2</sub>naphthyl, CH<sub>2</sub>thienyl, and

Z2 is -R3-Y-, whereby R3 is selected from the group comprising H, alkyl, arylalkyl, and Y is optionally present, and if Y is present, Y is selected from the group comprising H, N(YB1)(YB2), N(YB1)C(N-YB2)-N(YB3)(YB4),



, whereby YB1, YB2, YB3 and YB4 are individually and independently selected from the group comprising H, CN and alkyl, and optionally a ring is formed using at least two of YB1, YB2, YB3 and YB4, and

G is selected from the group comprising H, OR1 and NR1R2, whereby R1 and R2 are individually and independently selected from the group comprising H, alkyl, aryl, cycloalkyl and arylalkyl.

43. The compound according to claim 42, characterized in that

A is selected from the group comprising H, NH<sub>2</sub>, NHEt, NHAc, OH,

B is selected from the group comprising CH<sub>2</sub>Ph, CH<sub>2</sub>Ph(4-F), CH(Ph)<sub>2</sub>, CH<sub>2</sub>thienyl and CH<sub>2</sub>naphthyl,

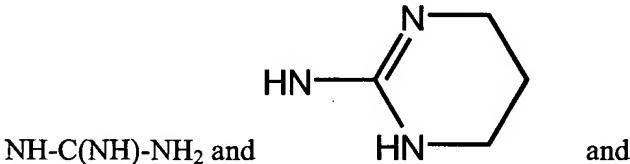
C1 is selected from the group comprising H and methyl, C2 is selected from the group comprising methyl and CH<sub>2</sub>OH, or if C1 and C2 are connected by a bond, the thus resulting structure is selected from the group comprising -(CH<sub>2</sub>)<sub>2</sub>-, -(CH<sub>2</sub>)<sub>3</sub>-, -(CH<sub>2</sub>)<sub>4</sub>- and -CH<sub>2</sub>CH(OH)CH<sub>2</sub>-.

D is selected from the group comprising CH<sub>2</sub>CH<sub>2</sub>iPr, CH<sub>2</sub>iPr, cyclohexyl, CH<sub>2</sub>cyclohexyl, CH<sub>2</sub>CH<sub>2</sub>cyclohexyl, CH<sub>2</sub>Ph(2-Me), CH<sub>2</sub>-S-tBu and CH<sub>2</sub>-S-iPr,

E is selected from the group comprising gCH<sub>2</sub>Ph, CH<sub>2</sub>Ph(2-Cl), CH<sub>2</sub>Ph(3-Cl), CH<sub>2</sub>Ph(4-Cl), CH<sub>2</sub>Ph(2-F), CH<sub>2</sub>Ph(3-F), CH<sub>2</sub>Ph(4-F), CH<sub>2</sub>indolyl, CH<sub>2</sub>thienyl, CH<sub>2</sub>benzothienyl and CH<sub>2</sub>naphthyl,

F is selected from the group comprising (CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, (CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, (CH<sub>2</sub>)<sub>2</sub>-iPr, CH<sub>2</sub>-iPr, iPr, CH<sub>2</sub>-S-Et, CH<sub>2</sub>CH<sub>2</sub>-S-Me, CH<sub>2</sub>CH=CH<sub>2</sub>, CH<sub>2</sub>-CCH and cyclohexyl,

Z2 is -R3-Y-, whereby R3 is selected from the group comprising CH<sub>2</sub>, (CH<sub>2</sub>)<sub>2</sub>, (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>4</sub> and CH<sub>2</sub>-C<sub>6</sub>H<sub>4</sub>, and Y is selected from the group comprising NH<sub>2</sub>, NHEt, N(Et)<sub>2</sub>,



G is selected from the group comprising NH<sub>2</sub>, NHMe, OH, and H.

44. The compound according to any of the preceding claims, whereby the compound is one of the following compounds:

No.	Compound
1	Ac-Phe-[Orn-Pro-cha-Trp-Phe]
2	Ac-Phe-[Orn-Hyp-cha-Trp-Phe]
3	HOCH <sub>2</sub> (CHOH) <sub>4</sub> -C=N-O-CH <sub>2</sub> -CO-Phe-[Orn-Pro-cha-Trp-Nle]
4	X-Phe-[Orn-Pro-cha-Trp-Nle]; X = 2-acetamido-1-methyl-glucuronyl

5	Ac-Phe-[Orn-Hyp(COCH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OCH <sub>3</sub> )-cha-Trp-Nle]
6	Ac-Phe-[Orn-Hyp(CONH-CH <sub>2</sub> CH(OH)-CH <sub>2</sub> OH)-cha-Trp-Nle]
20	Ac-Phe-[Orn-Pro-cha-Trp-Ecr]
28	Ac-Phe-[Orn-Pro-cha-Trp-Nle]
29	Ac-Phe-[Orn-Pro-cha-Trp-Met]
31	Ac-Phe-[Orn-Pro-cha-Trp-Nva]
32	Ac-Phe-[Orn-Pro-cha-Trp-Hle]
33	Ac-Phe-[Orn-Pro-cha-Trp-Eaf]
34	Ac-Phe-[Orn-Pro-cha-Trp-Ebd]
35	Ac-Phe-[Orn-Pro-cha-Trp-Eag]
36	Ac-Phe-[Orn-Pro-cha-Trp-Pmf]
37	Ac-Phe-[Orn-Pro-cha-Trp-2Ni]
38	Ac-Phe-[Orn-Pro-cha-Trp-Thi]
41	Ph-CH <sub>2</sub> -CH <sub>2</sub> -CO-[Orn-Pro-cha-Trp-Nle]
42	H-Phe-[Orn-Pro-cha-Trp-Nle]
43	Ac-Lys-Phe-[Orn-Pro-cha-Trp-Nle]
44	H-Phe-[Orn-Ser-cha-Trp-Nle]
51	Ac-Phe-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
52	Ac-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
53	Ac-Phe-Orn-Pro-cha-Bta-2Ni-NH <sub>2</sub>
54	Ac-Phe-Orn-Pro-cha-Bta-Cha-NH <sub>2</sub>
55	Ac-Phe-Orn-Pip-cha-Trp-Phe-NH <sub>2</sub>
56	Ph-CH <sub>2</sub> -[Orn-Pro-cha-Trp-Nle]
57	Ph-CH <sub>2</sub> -[Orn-Pro-cha-Trp-Phe]
58	Ac-Phe-[Orn-Pro-cha-Trp-1Ni]
59	Ph-CH(OH)-CH <sub>2</sub> -CO-[Orn-Pro-cha-Trp-Nle]
61	Ac-Phe-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
62	Ac-Phe-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
64	Ac-Phe-Orn-Pro-cha-Trp-2Ni-NH <sub>2</sub>
65	Ac-Phe-Orn-Pro-cha-Trp-Cha-NH <sub>2</sub>
66	Ac-Thi-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>

67	Ac-Thi-Orn-Pip-cha-Bta-Phe-NH <sub>2</sub>
68	Ac-Phe-Orn-Pro-cha-Trp-Eap-NH <sub>2</sub>
69	Me <sub>2</sub> -Phe-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
70	Ph <sub>2</sub> -CH-CH <sub>2</sub> -CO-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
71	Ac-Ebw-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
72	Ac-Phe-Orn-Pro-cha-Trp-NH-CH <sub>2</sub> -CH <sub>2</sub> -Ph
73	Ac-Phe-Orn-Aze-cha-Bta-NH-CH <sub>2</sub> -CH <sub>2</sub> -Ph
74	H-Phe-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
75	H-Me-Phe-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
76	Bu-NH-CO-Phe-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
77	Ac-Thi-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
78	Ac-Ebw-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
79	Ac-Phe-Orn-Ala-cha-Trp-Phe-NH <sub>2</sub>
80	Ac-Phe-Orn-Pro-cha-Trp-Thi-NH <sub>2</sub>
81	Ac-Phe-Orn-Aze-cha-Pcf-Phe-NH <sub>2</sub>
82	Ac-Phe-Orn(Ac)-Pro-cha-Trp-Phe-NH <sub>2</sub>
83	Ac-Phe-Orn-Aze-cha-Trp-Phe-NH <sub>2</sub>
84	Ac-Phe-Trp-Pro-cha-Trp-Phe-NH <sub>2</sub>
85	Ph-NH-CO-Phe-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
86	Bu-O-CO-Phe-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
87	Ac-Phe-Lys-Pro-cha-Trp-Phe-NH <sub>2</sub>
88	Ac-Phe-Arg-Pro-cha-Trp-Phe-NH <sub>2</sub>
89	Ac-Phe-Gln-Pro-cha-Trp-Phe-NH <sub>2</sub>
92	Ac-Phe-Orn-Pip-cha-Trp-Phe-NH <sub>2</sub>
93	Ac-Phe-Orn-Hyp-cha-Trp-Phe-NH <sub>2</sub>
94	Ac-Phe-Orn-Pro-cha-Trp-1Ni-NH <sub>2</sub>
95	Ac-Phe-Orn-Aze-cha-Bta-Phe-NH-Me
96	CH <sub>3</sub> -SO <sub>2</sub> -Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
99	Ac-Phe-Orn-Aze-cha-Pff-Phe-NH <sub>2</sub>
100	Ac-Phe-Orn-Aze-cha-Mcf-Phe-NH <sub>2</sub>
101	Ac-Phe-Orn(Ac)-Aze-cha-Bta-Phe-NH <sub>2</sub>
102	Ac-Ebw-Orn-Pro-cha-Trp-Phe-NH <sub>2</sub>
103	Ac-Phe-Trp-Pro-cha-Trp-Phe-NH <sub>2</sub>

104	Ac-Phe-Arg-Pro-cha-Trp-Phe-NH <sub>2</sub>
105	Ac-Phe-Orn-Pip-cha-Trp-Phe-NH <sub>2</sub>
106	3PP-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
107	Ac-Phe-Orn-Tic-cha-Trp-Phe-NH <sub>2</sub>
108	Ac-Phe-Orn-Ser-cha-Trp-Phe-NH <sub>2</sub>
109	Ac-Phe-Orn-Pro-chg-Trp-Phe-NH <sub>2</sub>
110	Ac-Phe-Orn-Pro-hch-Trp-Phe-NH <sub>2</sub>
111	Ac-Phe-Orn-Pro-cha-Trp-Phg-NH <sub>2</sub>
112	Ac-Phe-Bta-Aze-cha-Bta-Phe-NH <sub>2</sub>
113	Ac-Phe-Trp-Pro-cha-Bta-Phe-NH <sub>2</sub>
115	Ac-Phe-Orn-Pip-cha-Trp-Phe-OH
116	Ac-Phe-Orn-Tic-cha-Trp-Phe-OH
117	Ac-Phe-Orn-Ser-cha-Trp-Phe-OH
118	Ac-Phe-Orn-Pro-chg-Trp-Phe-OH
119	Ac-Phe-Eec-Pro-cha-Bta-Phe-NH <sub>2</sub>
120	Ac-Phe-Nle-Pro-cha-Bta-Phe-NH <sub>2</sub>
121	Ac-Phe-Har-Pro-cha-Bta-Phe-NH <sub>2</sub>
122	Ac-Phe-Arg-Pro-cha-Bta-Phe-NH <sub>2</sub>
123	Ac-Phe-Cys(Acm)-Pro-cha-Bta-Phe-NH <sub>2</sub>
124	Ac-Phe-Mpa-Pro-cha-Bta-Phe-NH <sub>2</sub>
125	Ac-Eby-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
126	Ac-Phg-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
127	Ac-Phe-Paf-Pro-cha-Bta-Phe-NH <sub>2</sub>
128	H <sub>2</sub> N-CO-Phe-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
129	Me-O-CO-Phe-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
130	(-CO-CH <sub>2</sub> -NH-CO-)-Phe-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
132	Ac-Phe-Orn-Pro-hch-Trp-Phe-OH
133	(-CO-CH <sub>2</sub> -CH <sub>2</sub> -CO-)-Phe-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
134	'Bu-CO-Phe-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
135	Ac-Lys-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
136	Ac-Gly-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
137	Ac-Arg-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
138	Ac-His-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>

139	Ac-Ser-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
140	Ac-Guf-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
141	Ac-Dab-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
142	FH <sub>2</sub> C-CO-Phe-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
143	Ac-Phe-Orn(Et <sub>2</sub> )-Pro-cha-Trp-Phe-NH <sub>2</sub>
144	Ac-Phe-[Orn-Hyp-cha-Trp-Nle]
145	3PP-[Orn-Hyp-cha-Trp-Nle]
146	Ac-Phe-[Orn-Pro-cha-Trp-Tyr]
147	Ac-Phe-[Orn-Pro-omf-Trp-Nle]
149	Ac-Phe-Orn-Pro-hle-Bta-Phe-NH <sub>2</sub>
150	Ac-Phe-Arg(CH <sub>2</sub> -CH <sub>2</sub> )-Pro-cha-Bta-Phe-NH <sub>2</sub>
151	Ac-Ala-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
152	Ac-Arg-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
153	Ac-Cit-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
154	Ac-Gly-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
155	Ac-Gly-Phe-Orn-Aze-chg-Bta-Phe-NH <sub>2</sub>
156	Ac-Gly-Phe-Orn-Aze-hch-Bta-Phe-NH <sub>2</sub>
157	Ac-Gly-Thi-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
158	Ac-His-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
159	Ac-Hyp-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
160	Ac-Lys-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
161	Ac-Mff-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
162	Ac-Mff-Orn-Pro-hle-Bta-Phe-NH <sub>2</sub>
163	Ac-Mff-Orn-Pro-hle-Mcf-Mff-NH <sub>2</sub>
164	Ac-Mmy-Orn-Pro-hle-Pff-Phe-NH <sub>2</sub>
165	Ac-NMF-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
166	Ac-Off-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
167	Ac-Off-Orn-Pro-hle-Bta-Phe-NH <sub>2</sub>
168	Ac-Orn-Phe-Orn-Aze-cha-Bta-Phe-NH <sub>2</sub>
169	Ac-Pff-Orn-Pro-cha-Bta-Phe-NH <sub>2</sub>
170	Ac-Pff-Orn-Pro-hle-Bta-Phe-NH <sub>2</sub>
171	Ac-Pff-Orn-Pro-hle-Mcf-Pff-NH <sub>2</sub>
172	Ac-Phe-[Cys-Pro-cha-Bta-Phe-Cys]-NH <sub>2</sub>

173	Ac-Phe-[Orn-Asn-cha-Trp-Nle]
174	Ac-Phe-[Orn-Aze-cha-Trp-Nle]
175	Ac-Phe-[Orn-Chy-cha-Trp-Nle]
176	Ac-Phe-[Orn-HyA-cha-Trp-Phe]
177	Ac-Phe-[Orn-Hyp-hle-Bta-Phe]
178	Ac-Phe-[Orn-Hyp-hle-Mcf-Phe]
179	Ac-Phe-[Orn-Hyp-hle-Pff-Nle]
180	Ac-Phe-[Orn-Hyp-hle-Pff-Phe]
181	Ac-Phe-[Orn-Hyp-hle-Trp-Phe]
182	Ac-Phe-[Orn-Hyp-Mmf-Trp-Nle]
183	Ac-Phe-[Orn-Hyp-Mmf-Trp-Phe]
184	Ac-Phe-[Orn-NMD-cha-Trp-Nle]
185	Ac-Phe-[Orn-Pip-hle-Bta-Phe]
186	Ac-Phe-[Orn-Pro-cha-Pff-Nle]
187	Ac-Phe-[Orn-Pro-cha-Pff-Phe]
188	Ac-Phe-[Orn-Pro-cha-Trp-1Ni]
189	Ac-Phe-[Orn-Pro-cha-Trp-Cha]
190	Ac-Phe-[Orn-Pro-cha-Trp-Chg]
192	Ac-Phe-[Orn-Pro-cha-Trp-Ecr]
193	Ac-Phe-[Orn-Pro-cha-Trp-Leu]
194	Ac-Phe-[Orn-Pro-cha-Trp-nle]
195	Ac-Phe-[Orn-Pro-cha-Trp-Phe]
196	Ac-Phe-[Orn-Pro-hle-Bta-Nle]
197	Ac-Phe-[Orn-Pro-hle-Bta-Phe]
198	Ac-Phe-[Orn-Pro-hle-Pff-Phe]
199	Ac-Phe-[Orn-Pro-hle-Trp-Nle]
200	Ac-Phe-[Orn-Ser-cha-Trp-Nle]
201	Ac-Phe-[Orn-Ser-cha-Trp-Nle]
202	Ac-Phe-[Orn-Ser-hle-Trp-Nle]
203	Ac-Phe-[Orn-Thr-cha-Trp-Nle]
204	Ac-Phe-[Orn-Tic-cha-Trp-Nle]
205	Ac-Phe-[Orn-Tic-cha-Trp-Nle]
206	Ac-Phe-Ala-Pro-cha-Bta-Phe-NH2

207	Ac-Phe-Arg-Pro-hle-Bta-Phe-NH2
208	Ac-Phe-Arg-Pro-hle-Mcf-Phe-NH2
209	Ac-Phe-Cit-Hyp-hle-Bta-Phe-NH2
210	Ac-Phe-Cit-Pro-cha-Bta-Phe-NH2
211	Ac-Phe-Cit-Pro-hle-Bta-Phe-NH2
212	Ac-Phe-Cit-Ser-hle-Bta-Phe-NH2
213	Ac-Phe-Dab-Aze-cha-Bta-Phe-NH2
214	Ac-Phe-Dab-Aze-hle-Bta-Phe-NH2
215	Ac-Phe-Dab-Pro-cha-Bta-Phe-NH2
216	Ac-Phe-Dap-Pro-cha-Bta-Phe-NH2
217	Ac-Phe-Ech-Pro-cha-Bta-Phe-NH2
218	Ac-Phe-Eep-Pro-cha-Bta-Phe-NH2
219	Ac-Phe-Fcn-Aze-cha-Bta-Phe-NH2
220	Ac-Phe-Fcn-Pro-cha-Bta-Phe-NH2
221	Ac-Phe-Fco-Pro-cha-Bta-Phe-NH2
222	Ac-Phe-Fco-Pro-cha-Bta-Phe-NH2
223	Ac-Phe-Fcp-Aze-cha-Bta-Phe-NH2
224	Ac-Phe-Ffa-Aze-cha-Bta-Phe-NH2
225	Ac-Phe-Ffa-Pro-cha-Bta-Phe-NH2
226	Ac-Phe-Ffa-Pro-hle-Bta-Phe-NH2
227	Ac-Phe-G23-Pro-cha-Bta-Phe-NH2
228	Ac-Phe-Guf-Pro-cha-Bta-Phe-NH2
229	Ac-Phe-Har-Aze-cha-Bta-Phe-NH2
230	Ac-Phe-His-Pro-cha-Bta-Phe-NH2
231	Ac-Phe-L22-Pro-cha-Bta-Phe-NH2
232	Ac-Phe-OrA-Pro-cha-Bta-Phe-NH2
233	Ac-Phe-OrE-Pro-cha-Bta-Phe-NH2
234	Ac-Phe-Orn-Aze-hle-Bta-Phe-NH2
235	Ac-Phe-Orn-Chy-cha-Bta-Phe-NH2
236	Ac-Phe-Orn-Chy-hle-Pff-Phe-NH2
237	Ac-Phe-Orn-G24-cha-Bta-Phe-NH2
238	Ac-Phe-Orn-G25-cha-Bta-Phe-NH2
239	Ac-Phe-Orn-G26-cha-Bta-Phe-NH2

240	Ac-Phe-Orn-G27-cha-Bta-Phe-NH2
241	Ac-Phe-Orn-G30-cha-Bta-Phe-NH2
242	Ac-Phe-Orn-G31-cha-Bta-Phe-NH2
243	Ac-Phe-Orn-Hse-cha-Bta-Phe-NH2
244	Ac-Phe-Orn-Hyp-hle-Bta-Phe-NH2
245	Ac-Phe-Orn-Hyp-hle-Pff-Phe-NH2
246	Ac-Phe-Orn-NMA-cha-Bta-Phe-NH2
247	Ac-Phe-Orn-NMS-cha-Bta-Phe-NH2
248	Ac-Phe-Orn-Pro-cha-1Ni-Phe-NH2
249	Ac-Phe-Orn-Pro-cha-Bta-1Ni-NH2
250	Ac-Phe-Orn-Pro-cha-Bta-Bhf-NH2
251	Ac-Phe-Orn-Pro-cha-Bta-Dff-NH2
252	Ac-Phe-Orn-Pro-cha-Bta-Eaa-NH2
253	Ac-Phe-Orn-Pro-cha-Bta-L19
254	Ac-Phe-Orn-Pro-cha-Bta-Mcf-NH2
255	Ac-Phe-Orn-Pro-cha-Bta-Mff-NH2
256	Ac-Phe-Orn-Pro-cha-Bta-NH-CH(CH <sub>2</sub> OH)-CH <sub>2</sub> -Ph
257	Ac-Phe-Orn-Pro-Cha-Bta-NH-NBn-CO-NH2
258	Ac-Phe-Orn-Pro-cha-Bta-Opa-NH2
259	Ac-Phe-Orn-Pro-cha-Bta-Pcf-NH2
260	Ac-Phe-Orn-Pro-cha-Bta-Pmf-NH2
261	Ac-Phe-Orn-Pro-cha-Bta-Thi-NH2
262	Ac-Phe-Orn-Pro-cha-Otf-Phe-NH2
263	Ac-Phe-Orn-Pro-ctb-Bta-Phe-NH2
264	Ac-Phe-Orn-Pro-ctb-Eaa-Phe-NH2
265	Ac-Phe-Orn-Pro-ctb-Mcf-Phe-NH2
266	Ac-Phe-Orn-Pro-ctb-Pff-Phe-NH2
267	Ac-Phe-Orn-Pro-hch-Trp-Phe-OH
268	Ac-Phe-Orn-Pro-hle-1Ni-Phe-NH2
269	Ac-Phe-Orn-Pro-hle-6FW-Phe-NH2
270	Ac-Phe-Orn-Pro-hle-Bta-1Ni-NH2
271	Ac-Phe-Orn-Pro-hle-Bta-2Ni-NH2
272	Ac-Phe-Orn-Pro-hle-Bta-5Ff-NH2

273	Ac-Phe-Orn-Pro-hle-Bta-Aic-NH2
274	Ac-Phe-Orn-Pro-hle-Bta-Cha-NH2
275	Ac-Phe-Orn-Pro-hle-Bta-Chg-NH2
276	Ac-Phe-Orn-Pro-hle-Bta-Eaa-NH2
277	Ac-Phe-Orn-Pro-hle-Bta-Egy-NH2
278	Ac-Phe-Orn-Pro-hle-Bta-Pcf-NH2
279	Ac-Phe-Orn-Pro-hle-Bta-Pff-NH2
280	Ac-Phe-Orn-Pro-hle-Bta-Phe-NH2
281	Ac-Phe-Orn-Pro-hle-Bta-phe-OH
282	Ac-Phe-Orn-Pro-hle-Bta-Tyr-NH2
283	Ac-Phe-Orn-Pro-hle-Dff-Phe-NH2
284	Ac-Phe-Orn-Pro-hle-Eaa-Phe-NH2
285	Ac-Phe-Orn-Pro-hle-Egc-Phe-NH2
286	Ac-Phe-Orn-Pro-hle-Egy-Phe-NH2
287	Ac-Phe-Orn-Pro-hle-Egz-Phe-NH2
288	Ac-Phe-Orn-Pro-hle-Mcf-2Ni-NH2
289	Ac-Phe-Orn-Pro-hle-Mcf-Cha-NH2
290	Ac-Phe-Orn-Pro-hle-Mcf-Pff-NH2
291	Ac-Phe-Orn-Pro-hle-Mcf-Phe-NH2
292	Ac-Phe-Orn-Pro-hle-Mff-Phe-NH2
293	Ac-Phe-Orn-Pro-hle-Mmy-Phe-NH2
294	Ac-Phe-Orn-Pro-hle-Ocf-Phe-NH2
295	Ac-Phe-Orn-Pro-hle-Off-Phe-NH2
296	Ac-Phe-Orn-Pro-hle-Otf-Phe-NH2
297	Ac-Phe-Orn-Pro-hle-Pff-2Ni-NH2
298	Ac-Phe-Orn-Pro-hle-Pff-Cha-NH2
299	Ac-Phe-Orn-Pro-hle-Pff-Eaa-NH2
300	Ac-Phe-Orn-Pro-hle-Pff-Mmy-NH2
301	Ac-Phe-Orn-Pro-hle-Pff-Pff-NH2
302	Ac-Phe-Orn-Pro-hle-Pff-Phe-NH2
304	Ac-Phe-Orn-Pro-hle-Phe-Phe-NH2
305	Ac-Phe-Orn-Pro-hle-Tff-Phe-NH2
306	Ac-Phe-Orn-Pro-hle-Trp-Phe-NH2

307	Ac-Phe-Orn-Pro-ile-Trp-Phe-NH2
308	Ac-Phe-Orn-Pro-omf-Bta-Phe-NH2
309	Ac-Phe-Orn-Ser-cha-Bta-Phe-NH2
310	Ac-Ser-Phe-Orn-Aze-cha-Bta-Phe-NH2
311	Ac-Thi-[Orn-Pro-hle-Bta-Phe]
312	Ac-Thi-Orn-Pro-cha-Bta-Phe-NH2
313	Ac-Thi-Orn-Pro-cha-Bta-Thi-NH2
314	Ac-Thr-Phe-Orn-Aze-cha-Bta-Phe-NH2
315	Bzl-[Orn-Pro-cha-Bta-Nle]
316	CH <sub>3</sub> CH <sub>2</sub> CO-Phe-Orn-Pro-cha-Bta-Phe-NH2
317	Def-[Orn-Ser-hle-Trp-Nle]
318	Eby-Phe-[Orn-Hyp-cha-Trp-Phe]
319	Eth-Phe-[Orn-Pro-hle-Pff-Nle]
320	FAc-Phe-Fib-Aze-cha-Bta-Phe-NH2
321	FAc-Phe-Orn-Aze-cha-Bta-Phe-NH2
322	FAc-Phe-Orn-Pro-cha-Bta-Phe-NH2
323	Fai-Phe-[Orn-Hyp-cha-Trp-Phe]
324	Faz-Orn-Pro-cha-Bta-Phe-NH2
325	Fbi-Phe-[Orn-Pro-cha-Trp-Nle]
326	Fbn-Phe-[Orn-Hyp-cha-Trp-Phe]
327	Fbn-Phe-[Orn-Pro-cha-Trp-Nle]
328	Fbn-Phe-[Orn-Pro-cha-Trp-Nle]
329	Fbn-Phe-Cit-Pro-hle-Bta-Phe-NH2
330	Fbo-Phe-[Orn-Pro-cha-Trp-Nle]
331	Fbp-[Orn-Pro-cha-Trp-Nle]
332	Fci-[Phe-Orn-Hyp-cha-Trp-Phe]
333	Fck-[Phe-Orn-Pro-cha-Trp-Nle]
334	Fck-Phe-[Orn-Pro-cha-Trp-Nle]
335	Fha-Phe-[Orn-Hyp-cha-Trp-Phe]
336	Fhb-[Phe-Orn-Hyp-cha-Trp-Phe]
337	Fhi-Phe-[Orn-Hyp-cha-Trp-Phe]
338	Fhu-Phe-[Orn-Pro-hle-Pff-Nle]
339	Fhu-Phe-Orn-Pro-cha-Bta-Phe-NH2

340	Fid-Phe-Orn-Pro-cha-Bta-Phe-NH2
341	H-Amf-[Orn-Aze-hle-Pff-Nle]
342	H-Bal-Phe-[Orn-Hyp-hle-Trp-Nle]
343	H-Bal-Phe-[Orn-Pro-hle-Pff-Nle]
344	H-Eby-[Orn-Hyp-hle-Trp-Nle]
345	H-Gly-Phe-Orn-Pro-cha-Bta-Phe-NH2
346	H-Nip-Phe-Cit-Pro-hle-Bta-Phe-NH2
347	Hoo-Phe-[Orn-Hyp-hle-Pff-Nle]
348	Hoo-Phe-Cit-Pro-hle-Pff-Phe-NH2
349	Hoo-Phe-Orn-Hyp-hle-Pff-Phe-NH2
350	Hoo-Phe-Orn-Pro-hle-Bta-Phe-NH2
351	Hoo-Phe-Orn-Pro-hle-Mcf-Phe-NH2
352	Hoo-Phe-Orn-Pro-hle-Pff-Phe-NH2
353	H-Phe-[Lys-Hyp-hle-Pff-Nle]
354	H-Phe-[Orn-Hym-hle-Mcf-Nle]
355	H-Phe-[Orn-Hym-hle-Pff-Phe]
356	H-Phe-[Orn-Hyp-cha-Trp-Nle]
357	H-Phe-[Orn-Hyp-cha-Trp-Phe]
358	H-Phe-[Orn-Hyp-ctb-Pff-Nle]
359	H-Phe-[Orn-Hyp-ctb-Trp-Nle]
360	H-Phe-[Orn-Hyp-ctb-Trp-Phe]
361	H-Phe-[Orn-Hyp-hle-Mcf-Leu]
362	H-Phe-[Orn-Hyp-hle-Pff-Chg]
363	H-Phe-[Orn-Hyp-hle-Pff-Hle]
364	H-Phe-[Orn-Hyp-hle-Pff-Leu]
365	H-Phe-[Orn-Hyp-hle-Pff-Nle]
366	H-Phe-[Orn-Hyp-hle-Pff-Phe]
367	H-Phe-[Orn-Hyp-hle-Trp-Hle]
368	H-Phe-[Orn-Hyp-hle-Trp-Leu]
369	H-Phe-[Orn-Hyp-hle-Trp-Nle]
370	H-Phe-[Orn-Hyp-hle-Trp-Nva]
371	H-Phe-[Orn-Hyp-hle-Trp-Phe]
372	H-Phe-[Orn-NMS-cha-Trp-Nle]

373	H-Phe-[Orn-NMS-hle-Pff-Phe]
374	H-Phe-[Orn-Pro-cha-Pff-Nle]
375	H-Phe-[Orn-Pro-cha-Pff-Phe]
376	H-Phe-[Orn-Pro-cha-Trp-Nle]
377	H-Phe-[Orn-Pro-hle-Mcf-Phe]
378	H-Phe-[Orn-Pro-hle-Ocf-Phe]
379	H-Phe-[Orn-Pro-hle-Pff-Nle]
380	H-Phe-[Orn-Pro-hle-Pff-Phe]
381	H-Phe-[Orn-Pro-hle-Trp-Nle]
382	H-Phe-[Orn-Ser-cha-Trp-Nle]
383	H-Phe-[Orn-Ser-cha-Trp-Phe]
384	H-Phe-[Orn-Ser-hle-Eaa-Nle]
385	H-Phe-[Orn-Ser-hle-Mcf-Leu]
386	H-Phe-[Orn-Ser-hle-Ocf-Nle]
387	H-Phe-[Orn-Ser-hle-Pff-Leu]
388	H-Phe-[Orn-Ser-hle-Pff-Nle]
389	H-Phe-[Orn-Ser-hle-Pff-Phe]
390	H-Phe-[Orn-Ser-hle-Trp-Nle]
391	H-Phe-Cit-Pro-hle-Bta-Phe-NH2
392	Ohf-[Orn-Hyp-hle-Trp-Nle]
393	Tmg-Phe-[Orn-Hyp-cha-Trp-Phe]

45. A pharmaceutical composition comprising at least one compound according to any of the preceding claims and additionally a pharmaceutically acceptable carrier.

46. Use of at least one of the compounds according to one of the preceding claims for the manufacture of a medicament.

47. Use according claim 46, characterized in that the medicament is used for the prevention and/or treatment of a condition associated with complement activation and/or where the inhibition of the complement system leads to a relief of the symptoms.

48. Use according to claim 46, characterized in that the medicament is used for the prevention and/or treatment of a condition where the inhibition of the C5a receptor alone or in combination with other therapeutics leads to a relief of the symptoms.
49. Use according to any of claims 46, 47, or 48, characterized in that the condition and/or the symptoms to be treated are selected from the group comprising autoimmune diseases, acute inflammatory diseases, trauma, local inflammations, shock and burn.
50. Use according to claim 49, characterized in that the condition is selected from the group comprising rheumatoid arthritis, ankylosis spondylitis, sarcoidosis, systemic lupus erythematosus, multiple sclerosis, psoriasis, septic shock, haemorrhagic shock, systemic inflammatory response syndrome (SIRS), multiple organ failure (MOF), asthma, vasculitis, myocarditis, dermatomyositis, inflammatory bowel disease (IBD), pemphigus, myasthenia gravis, glomerulonephritis, acute respiratory insufficiency, stroke, myocardial infarction, reperfusion injury, neurocognitive dysfunction, anti-phospholipid syndrome, burn, inflammatory diseases of the eye, local manifestations of systemic diseases, inflammatory diseases of the vasculature, and acute injuries of the central nervous system.
51. Use according to claim 50, characterized in that the inflammatory disease of the eye is selected from the group comprising uveitis, age-related macular degeneration, diabetic retinopathy, diabetic macular edema, ocular pemphigoid, keratoconjunctivitis, Stevens-Johnson syndrome, and Graves ophthalmopathy.
52. Use according to claim 50, characterized in that the condition is a local manifestation of a systemic disease, whereby the systemic disease is selected from the group comprising rheumatoid arthritis, SLE, type I diabetes, and type II diabetes.
53. Use according to claim 52, characterized in that the manifestations are selected from the group comprising manifestations at the eye, at or in the brain, at the vessels, at the heart, at the lung, at the kidneys, at the liver, at the gastro-intestinal tract, at the spleen, at the skin, at the skeletal system, at the lymphatic system, and in the blood.

54. Use according to claim 50, characterized in that the inflammatory disease of vasculature is selected from the group comprising vasculitis, vascular leakage, and atherosclerosis.
55. Use of at least one compound according to any of the preceding claims for the prevention and/or support of surgery, especially for the manufacture of a medicament for such purpose.
56. Use according to any of claims 46 to 55, characterized in that the medicament is used for the prevention and/or the support of surgery.
57. Use according to any of claims 46 to 55, characterized in that the medicament is used for the prevention and/or support and/or post-operative treatment of a surgery, whereby the surgery is selected from the group comprising CABG, PACT, PTA, MidCAB, OPCAB, thrombolysis, organ transplantation, and vessel clamping.
58. Use according to any of claims 46 to 55, whereby the medicament is used for thrombolytic treatment.
59. Use according to any of claims 46 to 55, characterized in that the medicament is used in the settings of dialysis therapy, optionally before, during, and/or after such therapy.
60. Use according to any of claims 46 to 55, characterized in that the medicament is used for the prevention of organ damage of a transplanted organ or of an organ to be transplanted.
61. Use according to any of claims 46 to 55, characterized in that the medicament is used for the prevention or treatment of transplant rejection.